



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/608,008

06/30/2003

Sang-Duk Lee

6192.0099.C1

1956

7590

10/23/2006

McGuireWoods LLP  
Suite 1800  
1750 Tysons Boulevard  
McLean, VA 22102

EXAMINER

NGUYEN, DUNG T

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/608,008

Applicant(s)

LEE ET AL.

Examiner

Dung Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 45 and 51-57 is/are pending in the application.
- 4a) Of the above claim(s) 53-57 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 51 is/are allowed.
- 6) ☒ Claim(s) 45 and 52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Applicants' amendment dated 08/01/2006 has been received and entered. Accordingly, claims 45, 51 and newly added claims 52-57 are now pending in the application.

#### ***Election/Restrictions***

1. Newly submitted claims 53-57 are directed to an invention that is independent or distinct from the invention originally claimed for the following reason(s) set in the requirement for restriction/election dated 06/17/2004

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 53-57 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

#### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 45 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto, US Patent No. 5,442,470, in view of Lee, US Patent No. 5,988,827.

Regarding claims 45 and 52, Hashimoto discloses a liquid crystal display (LCD) device (figure 2) having a mold frame (4), an LCD panel (1), a circuit board (3) fitting in a groove (4b) formed from lower surface of the frame (4), wherein the circuit board (3) was electrically coupled to the LCD panel (1) by a plurality of flexible printed circuits (FPC) (col. 4, ln. 43) and

Art Unit: 2871

the FPC is bent in a U-shaped (fig. 3, col. 4, ln. 62). Hashimoto, however, does not explicitly disclose the circuit board having a driver integrated circuit (IC). Lee does disclose a circuit board may include a plurality of ICs, which connected to the LCD (col. 2, ln. 63). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to employ the Hashimoto's circuit board including IC as shown by Lee in order to drive an LCD device and to save a space in a display device.

***Terminal Disclaimer***

4. The terminal disclaimer filed on 08/01/2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of the US Patent 6,862,053 has been reviewed and is NOT accepted.

5. An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c).

***Allowable Subject Matter***

6. Claim 51 is allowed.

7. The following is a statement of reasons for the indication of allowable subject matter

The references of record neither disclose nor make obvious a display device comprising a combination of various elements as claimed, more specifically of an inverter attached on the mold frame and having a first connector, a printed circuit board having a second connector at an end, wherein the first connector and the second connector are engaged for electrically connecting

Art Unit: 2871

the inverter and the printed circuit board by bending a flexible printed circuit to attach the printed circuit board on a lower surface of the mold frame as set forth in claim 51.

***Response to Arguments***

8. Applicant's arguments filed 08/01/2006 have been fully considered but they are not persuasive.

Applicant's arguments are as follow:

- a. Hasimoto groove 4b does not receive the IC 7.
- b. The circuit board is not directly mounted on the FPC 6.

The Examiner's responses are as follow:

- a. as shown in figure 2, the groove 4b does receive the circuit board 3. in other view, figure 3, the IC 7 is directly mounted on the FPC 6 which is directly mounted on the circuit board 3. As a result, the groove 4b inherently received the driver IC 7 as claimed.
- b. As shown in figure 3, the driver IC 7 directly mounted on the FPC 6 as claimed.

Accordingly, the rejection of the above claims stand.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2871

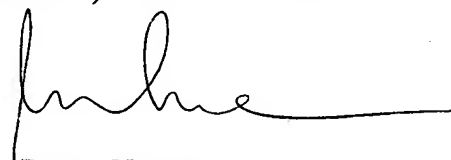
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN  
10/16/2006



**Dung Nguyen**  
**Primary Examiner**  
**Art Unit 2871**